

REMARKS

Claims 1 - 12 and 34 - 44 are pending. Claims 13 - 33 are cancelled herein without prejudice or disclaimer. Applicants request reconsideration in light of the following amendments and remarks.

Claims 1 and 34 have been amended to recite, in part, a step wherein resin is forced into the perforations formed in the reinforcement panel without the use of heat, thereby bonding the reinforcement layer to the reinforcement panel.

In the outstanding office action the Examiner objected to claims 9-10 and 42 as being dependent on a rejected base claim, but allowable if rewritten in independent form. As such, claims 9-10 and 42 have been amended and are now in condition for allowance.

Claims 13-33 were previously withdrawn from consideration. By the above amendment, Claims 13-33 have been canceled without prejudice or disclaimer, and the Applicants reserve the right to file divisional applications on these non-elected claims.

Favorable reconsideration is respectfully requested in light of the following remarks. Applicants request withdrawal of the outstanding objections and rejections, and allowance of the claims.

Rejections under 35 U.S.C. §103(a)

In the outstanding office action, the Examiner rejected claims 1 - 3 and 34 - 38 under 35 U.S.C. §103 as being unpatentable over JP abstract 58-076216 (hereinafter, "JP abstract '216") in view of U.S. Patent No. 4,082,882 to Weinstein et al. (hereinafter, "Weinstein"). Applicants contend that all the claims are patentable over these references, and request withdrawal of the rejection under 35 U.S.C. §103.

It is respectfully submitted that the Office Action does not meet the criteria for establishing a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the applied reference must teach or suggest all the claim limitations. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior

art also suggests the desirability of the combination. Further, the fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. See MPEP §2143.

With respect to the first criterion, there is no motivation to modify the JP '216 abstract with an outer coating of Weinstein to meet the claimed invention. Independent claims 1 and 34 have been amended to recite, in part, a method of manufacturing a composite sheet where resin is forced into the perforations formed in the reinforcement panel without the use of heat, thereby bonding the reinforcement layer to the reinforcement panel.

In contrast, the JP '216 abstract teaches away from the present invention by requiring that an SMC material be heated to a point where the SMC sheet itself melted into the holes. The Weinstein reference describes a process where a ribbed roller is used to force the resin through a fiberglass material having no holes therein. There is no teaching or suggestion to form holes in a reinforcement panel and to force resin into such holes without the application of external heat. Neither the JP '216 abstract nor the Weinstein reference, taken alone or in combination, teach or suggest the use of a perforated panel where a vacuum pressure is used to force a resin into perforations formed in a reinforcement panel. Accordingly, claims 1 and 34 are patentable over the combination of the JP '216 and Weinstein references. Since claims 1 and 34 have been shown to be patentable over applied references, at least for this reason claims 2-8, 11-12, 35-41 and 43-44 are also patentable over those references.

Further, in the outstanding office action, the Examiner rejected claims 4-6, 8, 39, 40 and 44 under 35 U.S.C. §103 as being unpatentable over the JP '216 abstract in view of the "Weinstein" reference and further in view of JP abstract 62-064527 (hereinafter "JP '527 abstract"). The claims 4-6, 8, 39, 40 and 44 depend from one of the amended independent claims, as discussed above. Applicants contend that all the claims are patentable over these references, and request withdrawal of the rejection under 35 U.S.C. §103.

The JP '527 abstract teaches the use of two sequential steps that are needed to form the JP '527 material: first, heat is applied to the materials, and, second, ultrasonic vibration

is used to push a melted material into holes in an adjacent material. There is no teaching or suggestion to form holes in a reinforcement panel and to force resin into such holes without the application of external heat. The JP '527 fails to supply any of the deficiencies the JP '216 abstract and the Weinstein reference. Rather, the JP'527 reference teaches away from the present invention by requiring extra steps or heat and ultrasound. None of the cited references teaches or suggests the use of a perforated panel where a vacuum pressure is used to impregnate adjacent layers in a laminated structure without the use of applied heat.

Still further, in the outstanding office action, the Examiner rejected claims 7 and 41 under 35 U.S.C. §103 as being unpatentable the JP '216 abstract in view of the "Weinstein" reference, further in view the "JP '527 abstract", and the cited Tellman et al. US Patent No. 4,655,859 reference (hereinafter "Tellman").

The claims 7 and 41 depend from one of the amended independent claims, as discussed above. Applicants contend that all the claims are patentable over these references, and request withdrawal of the rejection under 35 U.S.C. §103.

The Tellman reference teaches the scoring of veneered products with longitudinally extending blades in order to facilitate the drying of the product. One skilled in the art would not look to Tellman in order to form perforations through which a resin could be forced. There is nothing in the Tellman reference which supplies the deficiencies of the earlier discussed references. There is no teaching or suggestion to form holes in a reinforcement panel and to force resin into such holes without the application of external heat. Rather, the Tellman reference fails to supply any of the deficiencies the JP '216 abstract, the Weinstein reference and the JP'527 reference. None of the cited references teaches or suggests the use of a perforated panel where a vacuum pressure is used to impregnate adjacent layers in a laminated structure without the use of applied heat.

Finally, in the outstanding office action, the Examiner rejected claims 11-12 and 43 under 35 U.S.C. §103 as being unpatentable over the '216 abstract" in view of the "Weinstein" reference, further in view of the Sharp US Patent No. 5,054,645 reference (hereinafter "Sharp").

The claims 11-12 and 43 depend from one of the amended independent claims, as discussed above. Applicants contend that all the claims are patentable over these references, and request withdrawal of the rejection under 35 U.S.C. §103.

The Sharp reference teaches the use of resinous columns formed in a multi-layer material for underground tank. There is no teaching or suggestion to form holes in a reinforcement panel and to force resin into such holes without the application of external heat. Therefore, the Sharp reference fails to supply any of the deficiencies the JP '216 abstract, and the Weinstein reference, taken either alone, or in combination.

Therefore, at least for these reasons the cited reference fails to teach or suggest the invention defined in the claims. Accordingly, Applicants request withdrawal of the rejection under 35 U.S.C. §103.

Conclusion

None of the cited references teaches or suggests the use of a perforated panel where a vacuum pressure is used to impregnate adjacent layers in a laminated structure without the use of applied heat. Rather, the cited references teach away from the present invention by requiring at least one or more of the extra processing steps such as where the materials are heated in order to melt and flow into the holes; where a ribbed roller is used to force the resin through the fiberglass; or, where heat is used along with a vacuum.

In view of the above amendments and remarks, Applicants have shown that claims 9, 10 and 42 are in proper form for allowance, and the invention, as defined in claims 1-12 and 34-44 are neither disclosed nor suggested by the references of record. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of record, and allowance of all claims.